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EXAMINER

PIZIALI, JEFFREY J

ART UNIT	PAPER NUMBER
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2629

NOTIFICATION DATE	DELIVERY MODE
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10/30/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 09/991,378	Applicant(s) MILES, MARK W.	
	Examiner JEFF PIZIALI	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/17/09, 4/3/09, and 12/10/08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20,25,26,28,32,33 and 40-85 is/are pending in the application.
- 4a) Of the above claim(s) 20,25,26,28,32,33,40-63,65 and 68-85 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 64,66 and 67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the figures.

Specification

2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Election/Restrictions

3. *Applicant's election without traverse of Invention I (claims 64, 66, and 67)* in the reply filed on 3 April 2009 is acknowledged and appreciated.

4. *Claims 55-58, 62, 65, 70, and 71 are withdrawn* from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 3 April 2009.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. *Claims 64 and 66* are rejected under 35 U.S.C. 112, first paragraph, because the claimed "***electronically controllable active display area***" (*line 4*) is a purely functional recitation with no limitation of structure.

See Ex parte Miyazaki (BPAI Precedential 19 November 2008).

7. The remaining claim is rejected under 35 U.S.C. 112, first paragraph, as being dependent upon rejected base claims.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. *Claims 64, 66, and 67* are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claim 66 provides for the use of "*the product*" (*e.g., see lines 2-3: "when the product is in use"*), but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass.

A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

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Claim 66 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

11. Claim 66 is amenable to two or more plausible claim constructions.

The use of the phrase “*an electronically controllable active display area*” (*line 4*) renders the claim indefinite.

The claimed “*display area*” is amenable to two plausible definitions.

Based on the description provided in the Specification and the ordinary meaning of the words, “*display area*” could be interpreted to mean:

(a) A display device.

(b) An enclosed space or room containing objects for display.

Thus, neither the Specification, nor the claims, nor the ordinary meanings of the words provides any guidance as to what Applicant intends to cover with this claim language.

Due to the ambiguity as to what is intended by the claimed “*display area*” and the fact that this claim element is amenable to two or more plausible claim constructions, this claim is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the Applicant considers to be the invention.

See *Ex parte Miyazaki* (BPAI Precedential 19 November 2008).

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12. The term "***noticeable to the user***" in claim 66 (*line 8*) is a relative term which renders the claim indefinite. The term "***noticeable to the user***" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

One having ordinary skill in the art would appreciate that being "***noticeable to the user***" is purely subjective. For example, a user wearing a blindfold would be incapable of "*noticing*" any displayed images.

13. Claim 66 recites the limitation "***the selected appearances***" (*line 11*). There is insufficient antecedent basis for this limitation in the claim.

14. Claim 64 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: "***one portion of the surface comprises a separate component***" (*claim 64, lines 1-2*).

It would be unclear to one having ordinary skill in the art what, if any, earlier claimed element the "***component***" is intended to be "***separate***" from.

If intended to be "***separate***" from the "***surface***," then how is it possible for the "***surface***" to also "***comprise***" the "***component***"?

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15. Claim 67 recites the limitation "**surface**" (*lines 1 and 2*). There is insufficient antecedent basis for this limitation in the claim.

16. Claim 67 recites the limitation "**the fabrication**" (*lines 1-2*). There is insufficient antecedent basis for this limitation in the claim.

17. Claim 67 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

An omitted structural cooperative relationship results from the claimed subject matter: "**its**" (*claim 67, line 2*).

It would be unclear to one having ordinary skill in the art what, if any, earlier claimed element the pronoun "**its**" is intended to refer to.

18. Claim 67 recites the limitation "**the light**" (*line 4*). There is insufficient antecedent basis for this limitation in the claim.

19. The claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

As a courtesy to the Applicant, the examiner has attempted to also make rejections over prior art -- based on the examiner's best guess interpretations of the invention that the Applicant is intending to claim.

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However, the indefinite nature of the claimed subject matter naturally hinders the Office's ability to search and examine the application.

Any instantly distinguishing features and subject matter that the Applicant considers to be absent from the cited prior art is more than likely a result of the indefinite nature of the claims.

The Applicant is respectfully requested to correct the indefinite nature of the claims, which should going forward result in a more precise search and examination.

Claim Rejections - 35 USC § 102

20. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

21. *Claims 64, 66, and 67* are rejected under 35 U.S.C. 102(b) as being anticipated by

DeMond et al (US 5,079,544 A).

Regarding claim 66, ***DeMond*** discloses a product [*e.g., Fig. 1a: 75*] comprising:
a housing [*e.g., Fig. 1a: 1*] having a surface [*e.g., Fig. 1c & 1d: 34*] that is exposed for viewing by a user when the product is in use,
an electronically controllable active display area [*e.g., Figs. 1a: 15*] on the surface,
the display area including an array [*e.g., Fig. 1b: 17, 27, 37, 47*] of interference modulators of light on the surface,

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wherein the interference modulators comprise an absorber layer [e.g., Fig. 5c] spaced apart from a reflector [e.g., Fig. 1c & 1d: 32] by an interferometric cavity [e.g., Fig. 1a: 7]

(e.g., wherein Column 14, Lines 14-31 states, "The system of FIG. 1a may have color added by spinning a wheel such as shown in FIG. 5c within the light path leading to SLM 15. Used in this manner, the wheel of FIG. 5c has each major section acting as a different color filter. For example one section would filter all but red, the next all but blue, and the third all but green. Thus a single wheel would allow both luminosity control and color control. The wheel shown in FIG. 5c is by way of illustration only as the wheel could be divided into more color sections, or be comprised of wedges, or other configurations as may be appropriate."),

the display area providing an image at the surface,

the display area being capable of effecting different selectable appearances to the surface that are noticeable to the user, and

a controller [e.g., Fig. 3: 154] having a port [e.g., Fig. 3: 162] for receiving information defining the different selectable appearances from an external source (*see the entire document, including Column 10, Line 20 - Column 11, Line 57*),

the controller being connected to the display area for selecting one of the appearances for display and

for causing the selected appearances to be displayed to the user (*see the entire document, including Column 7, Lines 1-50*).

Regarding claim 64, **DeMond** discloses one portion of the surface comprises a separate component [e.g., Figs. 1c & 1d: 30] incorporated with the housing and

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in which the active display area is on the separate component (*see the entire document, including Column 7, Lines 1-50*).

Regarding claim 67, **DeMond** discloses an object [*e.g., Fig. 1a: 15*] whose surface [*e.g., Figs. 1c & 1d: 34*] is modulated by virtue of the fabrication of an array [*e.g., Fig. 1b: 17, 27, 37, 47*] of interferometric modulation elements on its surface,

wherein the interferometric modulation elements [*e.g., Figs. 1c & 1d: 32*] comprise an interferometric cavity [*e.g., Figs. 1c & 1d: cavity formed between top reflector 32 and bottom substrate 17*] for causing interference modulation of the light [*e.g., Fig. 1d: 6*] (*see the entire document, including Column 7, Lines 1-50*).

Response to Arguments

22. Applicant's arguments filed *10 December 2008* have been fully considered but they are not persuasive.

The Applicant contends, "*the DMD elements of **DeMond** comprise only a tiltable mirror, and do not comprise an absorber layer spaced apart from a reflector by an interferometric cavity... **DeMond**, which is directed to DMD elements which merely redirect light, does not teach or suggest interferometric modulation elements which comprise an interferometric cavity for causing interference modulation of the light*" (see Page 9 of the Response filed *10 December 2008*). However, the examiner respectfully disagrees.

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DeMond states, "*The system of FIG. 1a may have color added by spinning a wheel such as shown in FIG. 5c within the light path leading to SLM 15. Used in this manner, the wheel of FIG. 5c has each major section acting as a different color filter. For example one section would filter all but red, the next all but blue, and the third all but green. Thus a single wheel would allow both luminosity control and color control. The wheel shown in FIG. 5c is by way of illustration only as the wheel could be divided into more color sections, or be comprised of wedges, or other configurations as may be appropriate*" (see Column 14, Lines 14-31).

Therefore, an interferometric cavity [*e.g., Fig. 1a: along light path 7*] exists between **DeMond's** absorber layer [*e.g., color filter Fig. 5c*] and reflector [*e.g., Fig. 1c & 1d: mirror 32*].

Moreover, another cavity exists between **DeMond's** reflector [*e.g., Fig. 1c & 1d: mirror 32*] and the lower substrate [*e.g., Figs. 1c & 1d: 17*].

Applicant's arguments with respect to *claims 64, 66, and 67* have been considered but are moot in view of the new ground(s) of rejection.

By such reasoning, rejection of the claims is deemed necessary, proper, and thereby maintained at this time.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571)272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeff Piziali/
Primary Examiner, Art Unit 2629
23 October 2009